

POLYMORPHISMS IN THE IL4R $\alpha$  GENE (Accession No. AC004525)

TGTGAGCTAC	TGTGCTCTGGC	CTGAATAATA	AAATTTAAAA	CAATTTTTC	
AAAATTCCACC	ATGAGGTCTC	ACTATATTCC	CTAGGCTGGT	CTCAAAACCCC	30100
TGGACTCCAA	GTGATCCACC	CCACCTTCCC	GAGTAGCTGG	GACTAGAGAT	
GCACACCAAT	GCACCCAATA	GAGCAATACG	TTTCTGTCTC	TTGTAATATTA	30200
CTCTGCTCTAA	GGTATTTTGT	TTATAGCAGC	CTATATGGAC	TAAGCTGACT	
TGTAACGTTA	CTTGAGACTT	TAAAGTGTTT	CGGTCACTGT	TGGAGGGGCTC	30300
TGCTCTGTGT	AGCTCAATTA	ATCCCCACAA	CACTCAATC	AGATGGGGCT	
ATTCTTAGTC	CCACTTTTATA	GATAAGGAAA	CTGAGGCATG	GAAGCACAGC	30400
TTGCTCAAGG	TTACATCTTA	GTGAGTGACA	GAGCAGGTAT	TTAAACCTCA	
GGAAATAATC	AGAGAAACAT	GTGTAGAGGG	TTGTCCAAGG	AAGGCCACAT	30500
CCAGAAGCAT	CTCCAGGAC	AGTTGTTGTG	TAGCTCACCC	TCTGGACTTT	
GTGGGTCTGG	GTGTTGTTC	ATGATTATAG	AGAGAGCTCT	GTGAACGTGG	30600
AGGACCTGTT	GTCCGCAGAG	ACACAAATGG	CCAGGGCATG	GCTGGGCAGC	
CGCAGTGGCT	CAGGCCCTGT	ATCCAGCAGC	TTCCAGAGA	CCAGAGGGGC	30700
AGATCATGAG	GTCCAGAAAT	CAAGACCAGC	CTGGCCAACA	TGGTGAACCC	
CCGTCTCTAC	TAAATAATACA	AAAATTAGCC	AGGTGTGGTG	GTGGGCACCT	30800
GTAATCCAG	CTACTCGGGA	GGCTGAGGCA	GAAGAATCCG	TTGAACCCGG	
GAGGTGGAGG	TTGCAGTGAG	CTGAGATTGC	ACCACTGCAC	TCCAGCCTTG	30900
		G			
GAGACAGAGC	GAGACTCTGT	CTCGGAAAAA	CAAAACAACA	AGCAAAACAA	
CAAAACAATA	AATGGCCAGG	GCAGGGGAGG	GTTGCATATT	GAATAGAGAT	31000
AGCTCTGCTG	GAAGCACAGG	TCAGCACTAA	CCTGCTTCCT	CTCTCTCTGC	
AGGTGCCTTG	GCATCTCCCA	ATGGGGTGGC	TTTGCTCTGG	GCTCCTGTTC	31100
	[exon 3: 31071..				
CCTGTGAGCT	GCCTGGTCCT	GCTGCAGGTG	GCAAGCTCTG	GTAAGTCACC	
	..31140]				
ACTTCTCAAT	CATTCAATTG	TTGGCTATTA	ATGGCGTGCC	AGGGTCTGTC	31200
AGTATGTCAC	CTGGCCCTTAT	GGAGATTACA	CTGCAGTGGG	AGGGGACAGC	
CAATGACAAG	TGGCCCTGAT	TATCAGTAAA	TTCTAAAGAT	TGTTAGAAAG	31300
TGATGGGAGC	CGGGTGCAAT	GGCTCACACC	TGTAATCCCA	GCATCTCAGG	
AGGCCGAGGC	AGGAGGATCG	CTTGAGCCCA	GGAGTTCGAG	GTCAGCTTGG	31400
GCAACATAGG	GAGACCTTGT	CTCTACAAAT	AATAAAATAT	TAGCCAGGTG	
TGGCAGTGCA	CGCCTGTAGC	CCCAGCTACT	CAGGAGGCCG	AGGTGGGAGG	31500
ATCCCTTGAA	CTCAGGAGGT	CAAGGCTGCA	GTGAACCTGT	ATCGCGCCAC	
TCCACTCCAG	CCTGCGTGAG	AAAGTGAGAC	CCTGTCAAAA	AAAAAGAGAA	31600
GGTGATGGGG	AAAGAACACA	GAACAGCATA	AGAGGGGGTT	GGGGAGAGCT	
GGTGAGTGG	GGGGGATTGC	AGTTGAAAT	AGGGAAGTCA	GGGAAGGCCT	31700
CATTGAGCTG	ACTTGGAGGA	AGCGGGAACC	GTGCAGATGT	CTGGGGAAGG	
CTCATTCTTG	GCAGAGAGGC	CCTGCAGTGA	GCCTGGCGGG	AGGGTTGAGC	31800
ACAGGAGGGA	ATGTGTGGGA	GGAGAGTGAG	CAGCAGGAGG	GAGCAGTGAA	
GGTCAGCAAG	GTGCAGAGAT	GGCTGAATCA	AAAAAGACCT	TGCAGTGTTC	31900
GAGCAGAGGA	TCCATATCAT	CCATTATGTT	CCAAAGGACT	CTTCAAGGCT	
CCGTGTGGAG	AAAGGAAGAG	GGTGGAAACC	AGGAGGTCTG	GAGGGAGGTC	32000
TGGAGTGGAG	GAGATGAGAG	GCTCCGGATC	CCCTCTGGAG	GTAGATTTGA	
GGACAGATTG	GAATTGAGGT	GAAAGACAGA	GAAAGAGAGG	TGGCCAGGAT	32100
GACTCCAAGA	TTTCTGACCT	AAACTACTGG	GAAGGACGCG	GTTGTCAATT	
CTGAATGCA	GAAGGATGCC	AGAAGAGAGG	GTACTTTGGG	GAGGGCGGGG	32200
AATCAGGAGT	TAGTTTTGGA	CATGAGATAA	GCTTGGAAAT	TTTATTTGCT	
ATCTAAGACA	GCTCCTTAAC	ATGGTAAGCC	CTTATGCAAG	TTGTTGTGAG	32300
CTGAGATGGG	CGTGGCACTG	AGCATGGGAG	CATGGAGGCG	CCTGAGTGGT	
CTCATGCTCA	GGTGGTTTGA	CAAACTCAGT	GTACATCCTG	CCAATTCCAG	32400

FIGURE 1A

TCCTGCCATG	GCCACTGACA	AGCTAGGAGG	GCGCTGAAAG	GAGAAGGACC	
CCGATGTCTC	TCCAGGCCCA	TCCATCTCCT	CTCTCCCAT	GGCCAAACCC	32500
AAACCGAAAC	TAAAGGCCAA	GGGTACCCGG	TGATGAAGAC	TGTGGTATCA	
GCCTCCTGAG	CACAGAGAGG	GCAGAAAGGG	GTGGAGACAA	AGAGGGGCGC	32600
AGATAGTGGG	CAAAATGGGA	AGTGGCATT	CCCTAGCTC	GAGGGCAGAG	
GCTTGGTGTG	ATGGAATGGC	ACTCCTTAAA	CTGCTACATA	TGTTCCCTTT	32700
AAATTTGGCCA	AGAACAAAGT	GTCAGGTTTG	TGTGAGATAA	AGGTGCACCT	
GGTTCCCTTC	TGCTTAATGG	CCCCCGCACC	CATGGGTATT	TCTTCAGCTT	32800
CCACAGTCAT	CCCAGACATA	GCTGGGAAGC	TCCAGCAGCC	CTGTCTCTGG	
CCCCAGCTCT	GTGGGCGCTG	GCCCTCAACT	TGCTTGCAC	TGTGCTTTTG	32900
TGCTATTCCT	CTTGGTCCTG	TTTGGGTGCA	AGTCCCCCTC	ACGCATTGAG	
T					
TTCTCTGGGC	GCTCAGGCTG	CTCTGTGTC	TCCCCAGGGA	ACATGAAGGT	33000
T [exon 4: 32988..					
CTTGCAGGAG	CCCACCTGCG	TCTCCGACTA	CATGAGCATC	TCTACTTGCG	
AGTGGAAAGT	GAATGGTCCC	ACCAATTGCA	GCACCGAGCT	CCGCCTGTTG	33100
TAGCTCTGGG	TTTTCTGCT	CTCCGAGTAA	GCCTGCGCTG	GAGCTGGAGG	
..33126] C					
TTTGGGGAGG	TTGTGCCCCA	AGGGTTTGCC	CCAAGAGTGA	GCTGGGTCCA	33200
GGTGGTGCAC	TGGAGTCGAG	GATGCTGAGT	ATGGTTTGCT	GCTGTTTATA	
TGGTGTTAGA	GGGGAGGTCC	CATCTCCAGG	GACATGTTAT	GTAAGATACA	33300
GTGGAGCGCA	TGGTGGGAGT	GTTGGTCCAC	GTGGCACATG	GATACCGGCT	
GAATACCTGA	CTAGACCAGC	AGTTCCTACA	CTTTTGGTCT	TCAGGACCCCT	33400
TTTTCACACT	TAAAAATGAG	TGAGGACCCA	AAGGGCTTTG	GTGTAGGTAA	
CACATCATTC	TATGTTTACC	TAATTAGAAC	TTGCAATGAA	GAATTGGTGT	33500
AAATTTTAAA	AAATTTAAAC	AAATTAATAA	TTTTTTCTCT	ACTGAAATGG	
AGCTCTCACT	GTGTTGCCCA	GGCTGCTCTC	AAACTCCTGG	GCTCCAGTGA	33600
TCCTCTCTGC	TCCGCTCTCC	AAAGTGCTGG	GATTACAAGC	GTGAGCCGCT	
GTATCCGGCC	CAAAATGGAG	AAATTTTAAG	TCCCAACAAC	ATGCAAGTCA	33700
GCATTCAACA	AATCTTCAGA	TCAATTACAT	GATCAGAGT	CATGTAGCCT	
CTAGAAAAAT	CCACTGTACG	CCAGTIGAGG	AGAGTGAAAA	GGCAATAAAC	33800
GTCCCTGTAT	TATGATGAAA	AGAGTTTATC	CTGGTGGGCC	CAGACQACAC	
TTTGAGAACCC	ACTGGACTAG	ACCCTTGATT	GAGGAGTAGG	GTGTTGAGAG	33900
TGGAGTCCCT	TGTGATGGTG	GATGGACCAG	GACACATGGC	ATAGGAGTCA	
GGTGGTTCCT	TGGGCTACTC	CATGGTGCAC	AGGATGCTTC	GTTACACTGG	34000
TGCCCAGGAC	ATAATCACGT	ACACAAGACA	CACAGTTACG	GGGCAGACTG	
GGGATATACG	GCACACCAGC	ATGCAGCGTT	CACCAGTAAA	GGTGCTATTG	34100
CATGATTATT	CTAAGGTAGA	TGGGCTGTGC	TTTGTTTCCA	TGCGCTTAGT	
CCAGGGATTG	GCAAACATAG	GCCCGTGAGC	CAAAATCCGG	CCACTGCTTG	34200
TTTTTGTAAT	TAAAGTTTAA	TTGGAACACA	CTGGCTGCTG	TAGTTGTAAAC	
AGAAATCTGA	TGGCCCTCCT	TTATGTTTTT	TGTTTGTGTT	TTTGTGTGTT	34300
TGTTTTCTTT	GAGACAGAGT	TTGCGCTCTG	TGCCCCAGGC	TGGAGTGCAG	
TGGCAACAAT	TCGGCTCATC	GCAACCTCTG	CCTCCCGGTT	TCAAGCGATT	34400
CTCCTCTCTC	AGCCTCCCGA	GTAGTTGGGA	TTAATGGTGC	CTGCCACCAC	
ACCCGGCTAA	TTTTTCTGAT	TTTTAGTAGA	GACCGGTTTT	CATCATGTTG	34500
GCCAAGCTGG	TCTCGAATC	CTGAACCTAG	GTGATCCACC	CGCCTCAGCC	
TCCCAAAGTG	CTGGGATTAC	AGGCATGAGC	CACAGAGCCC	GGCTCTCTCC	34600
TTTATCTTAA	TGTAAGATAAT	TGAGAAATGG	AAAGTCAAAAT	ACTGCATGTT	
CTCAGTTATA	AGTAAGAGTT	AAATAATGTG	TACACATGGG	CATTATTCCA	34700
TGTACCATGG	AATAACAGAC	ATTGAAGACT	TGGGAGGGTG	GGAGAGGGGT	
GAAGGAAGAG	AAGTTACTTA	ATGGGCATAG	TGTACACCAT	TGTTGGTGACG	34800
GACCCACCA	AACCCACGAT	TTACACCACTA	GGCAGCATAT	CCAGTGAGAA	
CAGATCTGAG	GCTTGCCATC	AAAAATTGCAC	TTGTAAGGCC	GGGCACCTGT	34900
GTGGCTCGCG	GCTGTAATCC	CAGCCCTTTG	GGAGGCCGAG	GTGGGCGAGT	

FIGURE 1B

CACTTGGAGGT	CAGGAGTTCG	AGACCGGCCT	GGCCAACATG	GTGAAGCTCC	35000
ATCTCTACTA	AAAATACAAC	AATTAACTGG	GTGTAGTGGC	GCACACCTGT	
AATCCCAAGCT	ACTAGGGAGG	CTGAGGCGGG	AGAATTGCTT	GAGCCCAGGA	35100
GGTGGAGGTT	GCAGTGAGCC	GAGATCACAT	CACTGTACTC	TAGCCTGGGT	
GACAGTGAGA	CTTTGTCTCA	GGAAAAAACA	CAAAAAACAA	AAAAACAAAA	35200
ACTCGTACCC	CCTAAATTTA	TACAAATAAC	CAAAAAAACA	AAAAAAAAAG	
GAATTTGGTG	GGCCTTTGAA	GTCCAAAAATA	TTAACTATCT	GGCCTGTTAC	35300
AGAAAAAGTT	TGCAGACCCC	TGGCCTAGCC	CGTGAGATGT	GGGTGGGCTG	
TTAAGGTGGA	ACATTGGAAT	TATCTTACGA	TGGCCAAACT	TGCGCATGCA	35400
GAGCTTATGT	TGTTCTAAAT	TAATTAGTGC	CACCGGTTCT	TCCTTTTCAT	
GGGCTTTTCA	GAACAAGCTA	AGTCCCAGGA	CCAGGGCCGG	CAGCTAGGCA	35500
GGTGTGAGGA	GCATCCTTGG	TGCATGTGGT	AAGAGGCTGT	GGCCAGCAAG	
AGAGGCAACC	CTAGTCGGCT	GCCCCAGCAC	ACCCTGGCCG	CTCCCAAGCC	35600
CCCAGATCTG	TCCTCACATC	CGTGATCGGG	AAGCTGGAAG	AGTCTGATGC	
GGTTCCTGGA	GGCATGTCCC	GGACACAGCT	GTGGGGCCCA	GCCAGCCTAC	35700
AGGTGACCAG	CCTAACCCAG	CCCCTGTGTC	TGCAGAGCCC	ACACGTGTAT	
				G	
[exon 5: 35736..					
CCCTGAGAAC	AACGGAGGCG	CGGGGTGCGT	GTGCCACCTG	CTCATGGATG	35800
	T A				
ACGTGGTCAG	TGCGGATAAC	TATACACTGG	ACCTGTGGGC	TGGGCAGCAG	
	C				
CTGCTGTGGA	AGGGCTCCTT	CAAGCCCAGC	GAGCATGGTG	AGCAGGGCCG	35900
	..35887]				
AGTGCGGCAG	GGGTGGCTGG	GTGTGTTCCC	ACAGCTGCCT	GGGCTGAGGG	
	T			T	
TGGGGTGGGC	AGGGGAGGAG	GTGGGTCAT	AGCAACAGCA	GGAGGAAGCC	36000
	A				
GCCTGTATTT	TCCCAAACTC	GATGGGATTC	CTGCCCCCTG	CTGGGCTCTA	
GTCCCTCCAC	CTTTGAAACG	GAGCTGCTCG	CAGTAGACCA	CCAAGCCCCC	36100
TTCAGCCAG	CTGTTTCCAC	CCCTGAACTT	AAGTGCCCG	GAAGGCGTAT	
TGAGATGAGG	TGTGCTTGCT	GGAAAGGCATG	CCTGCTGCTG	ATTGAAAACC	36200
GAACCTGGGA	CATTCTCTCC	ATTCTGTGTC	CACTGGTCAG	CTGCTGCGGC	
TTTGATGGT	CTTGACCGTG	GAAGGCTGAC	CTTCTTCTGG	TACCCGGAGT	36300
CCCTGCAGGA	ATCCCCCTTG	AGCTTGCTGG	GCTGTGGTGA	CAGGAGTTTA	
AAACATGCGT	TGTATTCCAG	TGATGCATGA	TATGACATGC	ATCACAGGAA	36400
TAAAAACCTG	AGGTCTCATG	GATATGATTG	CTTCAAAAGG	GACCAAGTTT	
TAAAAACAGAT	GAATCAAAAT	AAAGAAAAAT	ACTCAGTAAA	TCATCATATA	36500
GTACAGAGAT	GTGGCCAAAG	GTGTGAAGGA	TGCAGCTGTA	AAAGCTGAAG	
TTTGAGGCCG	GGTGTGGTGG	TTCATGCCTA	TAATCCCAGC	ACTTTGGGAG	36600
GCCGAGCCCA	CGCGATCACC	GGAGGTCAGG	AGTTCGAGAC	CAGCCTGGAC	
AACATGGTAA	AACCCCGTCT	CTACTAAAAA	TACAAAAAAT	TAGTCTGGCA	36700
TGGTGGCAGG	CGCCTGTAAT	CCCAGCTACT	TGGGAGGCTG	AGGTAGGAGA	
ATGGCTTGAA	CCGAGGAGAA	GGAGGTTGCA	GTGAGCTTAG	ATCATGCTAC	36800
TGCCCTCCAG	CCTGGCGCAC	AGAGTGAGAT	TACGTCTCAA	AAAAATAAAA	
ATAAATAAAA	ATAAAAAGAT	TTTTTAAAG	GCTGAAGTTT	GGTTTACTTT	36900
GGCTCATACA	CTTTGCCCTC	ACTGTAGAAA	GGTGGTTAGT	AAAGACCAGG	
CGCGGTGGCT	CATGCCCTGGA	ATCCCAGCAC	TTTGGGAGCC	CAGCGCAGGC	37000
AGATCACTTG	AGCCCTGGGC	TATTGAGGCT	GCAGTGAGCT	GGGATTGTGC	
CACTGCACCT	GAGCCTGGGC	AACAGAGTGG	GACCCGTGCT	CAAAAAGAA	37100
GAIAAAAGG	GTAATTAAAT	AACACTAAAG	TTCTATGTAG	AATTTTAGCA	
ACATTATTGT	TATTATAATC	TTCTTTGCTA	TGGCTCTGAA	TCTGTGTGGT	37200
GCTCCAGAAG	TATGCTATGG	AGGTTTTGTC	GACCAAAAT	CTGGGTGGTG	
GCTGTGGGTT	GTAGGCCGGG	GCTGGGCTGG	GTGATGGGGG	AGTCACTGCA	37300

FIGURE 1C

TAGATCTCTCA	CATAGAGGCC	GCTTCTCCCG	CAGTGAAACC	CAGGGCCCCA	
		A			
[exon 6: 37334..					
GGAAACCTGA	CAGTTCACAC	CAATGTCTCC	GACACTCTGC	TGCTGACCTG	37400
GAGCAACCGG	TATCCCCCTG	ACAATTACCT	GTATAATCAT	CTCACCTATG	
CAGTCAACAT	TTGAGTGAA	AACGACCCG	CAGATGTGAG	TGGGCATGCT	37500
		T			
		..37485]			
TTGACGTTTT	TCTGTGACCT	CTGGGAACA	GGGTGGGTGA	CCAGCAGAGG	
CCCAGTCCCT	GGAGCCAGGA	GCCTGGGAGG	CAAGCCCTGG	GGCTGGATAG	37600
			T	A	
CAAAATCCCG	GAGCTAGAGA	CCTGGCTTCT	CACCTGGCTC	TGCCCTTAGGC	
		T		A	
AAGTCCCTTT	GCTTCTTGCC	CCCCCACCC	TCACATCAGA	GAAGGGGAGT	37700
		T			
TATCTCTGCA	TGCCGCTCCT	CCTCTGTAAA	GGTAGGGCTG	TGGGCCACAT	
CTGTGTTTCC	CAGTTTGGGG	GACACAAGTG	ATCGTAGGTG	GCACATTGAC	37800
AGCTCACTTG	AATAAACCCTA	TTATTGAAGA	GAATAATACT	GACTCAAGAG	
ACAGTGACCC	GTGTCACTTC	CCTTTTGAGG	CCAACGGGTT	AAGGAGGAAG	37900
TCCCCATACA	GCTGACTCGT	TTACTAATTC	CTCTTAATGA	AGAGAGCAGA	
GGCCACACCC	CAGGCTTAGA	CTTTCCCAAG	AAAACAAGAT	CAGTTTGTGT	38000
GTTGTCCCC	ATGGAAGCTG	GTCCTGACAT	TC CCTTCACA	GTAGTGTGTTG	
TGGAGTTTTT	GTTGTGTGTT	GTTTGTGAGC	AGAGTCTCAC	TCTGTACCCC	38100
AGGGTGGAA	ACAGTGGCGT	GATCTTGCT	CAGTGCACCC	TCCGCTCCT	
GGGTCTAGC	GATTCTCTG	CCTCAGCCTC	CTGAGCAGCC	GGGACTACAG	38200
GCACCTGAGC	CCGTGCCAG	CTAATTTTTG	TATATTAGT	AGAGATGGGG	
TTTCACTGCG	TGGCCAGCG	TGGTCTCAA	CTCCTGACCT	CAGATGATCC	38300
ACTCGCCTTG	GCCTCCCAA	GTGCTGGGAT	TACAGTGTG	AGCCACCGCA	
CCTGGCCAGT	GGAGTTCCTT	CTTAAGTACA	TGTATTGACA	TCTTTAAAAA	38400
GGGCGAGAGG	ATTACAGGA	AACATCAGG	TCAGTAATGG	CAGGGGCCGT	
CCACAGTGGG	TGGCTGATC	CCCCTATTTT	TCTGCTGGTG	TGCAGGGAGG	38500
TCATTCTCTG	CCACCATGCT	TCCCCACCC	TGAATCCACC	TTCCTCATAT	
TCCATTCTGA	GGGCAATCT	CTGGACATAT	GGGACCTGGG	GTCCCAAGG	38600
GCTGCAATCC	AATGCCCTGCT	GTGCCACTCG	CCAGCTGTGT	GATGTTGGGC	
ATATCCCAT	ACCTCTTTGT	GCCTCAGTTT	CCTCATCTGT	AACACAGGAG	38700
TGACAAGAGC	ACCCGCCAC	AGGGCTATGA	CAGTACAAGG	TGTTGTATAC	
AGATGAGCTC	CCCTGTTTGG	CCCACATGTG	TCCTAAAGC	CATGTGCCCT	38800
TTCTCTTGAG	TGCCCCAGGC	CACAGAGATC	CCCATCTGCC	CGCTGTCCCA	
CACACTGGTG	GTGCATTTGT	TCCTTGAGGT	TTGTGAGGGC	CGGCTCTGTG	38900
CATCCCCAGG	GCCCCAGGCTG	GGCCTGGTTG	GCTCTCAGGG	AGCAGGCACC	
CGCCACCTTA	AGCTCCCATG	CTGGTGTCTG	TCAGTGCTTC	CTCTCAATCT	39000
GGCCAGGCCA	GGGGTGTCTGA	TTTATATCTC	TCAGGTCTGG	TTTCCCCCTT	
GGCACTGGGC	CAGGTATGGG	GAAAGAGCAG	GAATGGGGCA	GTTGGCTCAC	39100
ACAGCAGAGG	CTCAGAAAGC	GGGGGGCATG	GGGGGAAGGA	GTGCACAGAT	
GCTAGAGAGT	GGGGCAAGTT	TTGTTTGGTC	AATAAATCTC	CTTCTCATGC	39200
CCAGGCGCTG	TGCAAGACCT	ACAGAGAGTC	CCAAGGATGG	GCTGGGGGGA	
AGAGAAAGGT	ACCACCTTCA	GAGTCCAAAG	ATATGTTATT	TAATATTTTC	39300
ATATTTCTAG	ATCTGCCTTC	AGGCATGGCT	GGATCCAGCT	TCTAGGAACC	
TGTCAGGCTC	TGCGCCCTGC	TTTATTCTGT	ATTGGCTTCG	TTTTTAGGCA	39400
GGCTCTTCCC	TCATGTAGTG	GCAGATATGC	CTACTAGTTG	CTCCAGGCGCT	
ACATCCCAA	GCCACAGTGG	GAAAAGGGTT	TTTTTCTCTG	ACGGTTCTAA	39500
TAAGAGTCCT	AAGGCTGCTG	CTCAGTGGCC	TGGCTTCGAT	GCTGTGCCAG	
CCTCTGAACC	AATCACTGGC	TGTGGGTGGA	GAGAGGGTGC	TGTTGGAGGG	39600

FIGURE 1D

CCCTGCTTGT	CCAGGGAGGA	GTCAACATACC	TGCCTCTAGG	GCTGCAGGTG	
GGCTCAGCTC	CATCCAAACC	AGATGAACTG	AAAATAAGGC	AGGAGTGGCT	39700
TCCCCAGGGG	AAACTGGGGA	AGAGGAAGCA	GGACTGTGCT	GGCTAAAAATG	
CCAGCCAGGT	TTAAGACGTG	GCACCAGATG	CCAGTCATGG	GATTGGATTG	39800
GTCAGCATGC	CTGGGCTATG	GCTTAGGGGT	ATGTTGGTGC	TCAGGGATGC	
CACAGGCCCT	CAGATACAGC	GTCTGAGGCA	GAAGAATGAA	GTCCAGCTTC	39900
TCCTGTGGGT	GGAAACAGTG	CAACTGAGAT	ACCCCATCTC	TCCCTTCCCA	
AGAACACAGC	TGAACATAAA	GAATTTAGTG	ATTGGCCAGA	GCTTTGGCCAC	40000
ATGCTCCCTC	CTGATGAATG	ATAGGCCAGG	TGATGGGATT	GGCACAAATTG	
GCTTAGACTA	ATGAGGGTTG	GCCTTGGAGT	TGCAGGCCAGT	GGAGTTCTGT	40100
CCTAAGCAGT	GGGCACCTAA	ACCCGATGGC	ATAAAAGCTG	GGCGGGTGT	
CACCTGCATC	TGCCACAGCA	CTATAGGCAC	CAACTGTGGC	TCATACTGAG	40200
TGGGATAAAT	TCCAGAAAGA	AACATTAGGA	ACTTACTATA	GAATTTTGGG	
GCTATAGCTA	CTCATTCATT	CCCTTAGATA	ATTTCTAGGC	AAGGTTCCAT	40300
AGTGGAGGGG	GAGTTTTTGGC	TTGGGCATTG	AAGGATGCAT	AGGAGTTTTT	
TAGATGGGGA	AAGAAGGGAA	CGGTAGACCA	GGCAGAGGGA	ACTGCATGAT	40400
AAAAGGTTTA	TGGGTGTGAA	AATTCATGGA	ATGTTTGAGG	ATTATGGGGT	
TGGGGAGTAGT	GGGAATATGT	GTAGCGATAA	AGCACCAAAAC	AAAGCCAAAAA	40500
GTTTGTAGTTAG	AGCCCTGAAT	GCCTGCCTCA	TAATGGTTTC	CATATTTTAT	
ATGCCTACTA	TGTGCCAGGC	ACATTGCTCA	GGGTACACAC	GCTGGAATG	40600
GCAGGGCTGA	GTTTTTGTG	TTGTTGTTGT	TGTTGAGACA	GAGTCTCACT	
CTATCACCCA	GGCTGGAATG	CAGGGGCGTG	ATCATGGCTC	AGTCGATCCT	40700
TGACTTCCGT	GGATCAGGTG	ATTTCTCCAC	CTCTGCCTCC	CAGTAGCTG	
GGACTAGAGCT	CACAGGCCAC	CAGGCCAGGC	TAATTTTTTG	TATTTTTAGT	40800
AGCGACAGGG	TCTCGCCATG	TTGTCCGGGC	TGGTCTGGAT	CTCCTGGCTT	
CAAGTGATCC	CCCTGGGTCA	GCCTCCCAAG	GTGCTGGGAT	TACAGGCTTG	40900
AGCCACCGCA	TCCAGCCAG	ATCTGAGATT	TGCACCCAGT	ATTTGAACCT	
CCAAAGCTGT	GCTCTTTTTC	CTCCCATGGA	CATTTCTCTC	AGAGATGGTC	41000
TCCCAACAC	CTGTCTTCT	TGTTAAAAAA	CAGACAAACC	GCAAGTAGTT	
CTTTGGAAGC	TCAGATTCT	CTTTTGTTC	TTAGTAAAC	ATTTCCAGT	41100
TCCCAAGCTCC	CTTCCAGGGT	GTAAGATTTC	TTCCGTAAC	TACATCTAGC	
TGTTGCTTCT	TGTTTGCTCA	TGTTTAGAAA	GAAAGACAAA	AGAGAGTGAG	41200
AATTTTCTCT	CCCTTCCCA	GTCTCCCCAC	AACTCACACC	CCACCTTCAG	
CTCCCTCTGT	AATAGGAAA	TCTCTGAAT	CTCTGTAGTT	GCTCCAGCAA	41300
TCCTTTGGAA	CTTTGCTTCT	TTCTTGTA	AAAACCTCCC	CTTGGCTCAC	
TTTGACACCG	GTTTCCCCAA	ATGTGCTTCC	AACCACAAGC	AGAAATGGAG	41400
CTGCCAGTAA	CCAGGAAGAA	ACTGCCGGGG	GCTGAGGAAG	AGGAGAGGGA	
GGTGCAATAGC	CTGTGATCTC	GCAGGGAGAG	GGGTGACAGG	ATGAGAACCT	41500
AGGTTGCTCA	CTTGCCATCA	GGGTCACTCA	TGAATATAGC	GTTCAATGTAT	
CACTTTTTAA	AGCTTTTTTG	GAGGGTAAAA	GTAATAGTTA	CACAAAATAA	41600
AAATACAAAT	GGTACAAAAG	GACTTAGAAT	GGAAACATGT	TTCTCTCCCG	
ACTCCAGGCT	CTGTGTTTTT	TTCCACAGAG	CTGACCACTG	CTGTCTGTCT	41700
CTTGCCAGAA	GGGAAAGGGA	GGCAAGGTTA	GGGCAGGCAG	AGGGCATGTG	
CATCCTTTAG	AGAGAGCTTA	TGCTATACA	AGCAAATGTG	TGTGTTAGT	41800
CATCGCTGTC	TTAGTTTTCT	ATTGCTGCAT	AATAATGGTA	CTACCAGCTT	
CACAGCTTTA	AAACAACACC	ATTTATTATC	TCATAGTTTC	TGTGGTGGG	41900
AGTCTGACA	TAGCTTAGCC	AGGTTCTCTG	CTTTAGAGTC	TCGTGAGGCT	
ATAATCAAGG	TGTGGGATGG	GGCTGCAGTT	TCATCTGAGG	CTCAATTGGG	42000
GAAGGGTCAC	TTCTAAGCTC	ATACAATATT	GGTGACATTC	AGTCCCTGGC	
AGGCTGTTGA	ACTGAGAGCC	TCAGTTTCGT	GCTGGCTGTT	GGTTGTAGTT	42100
AACCTCGAAT	TCCTTCCCAT	GTGCCCTTTG	CAAAGCCATC	AAGGCAGAGA	
GACTTGCCTA	GCAAGTAGGA	TATTACAGTC	TTCTGTAATA	TAATCACATC	42200
CATGAATACC	TCTATATATC	CCATCACCTT	TACCATATT	TGTGGGTTAG	
AAACAAGTAG	CAGGTCTCTG	CCACACTCGA	GAAGACCAGA	TGACACAAGG	42300

FIGURE 1E

ATGTGATTCA	AAGTGGGGAT	CATCGGGGCC	ATCTTAGGTT	TGTCGTCAGT	
GATCACTGTG	CCATCTCTCT	CTCTCTCTTT	TTTTTTTTTT	TTTTTCCGAG	42400
ACGAAGTCGT	CACTCTGTCA	CCCAGGCTGG	AGTGCAGTGG	CATGATCTCA	
GCTTACCACA	ATCTCTGCCT	CCCAGGTTCA	AATGATCTCT	CTGCTTCAGC	42500
CTCCTGAGTA	GCTGGGATTA	CAGGTGCCCG	CCACCACACC	CAGCTAATTT	
TTGTATTTT	AGTAGAGACA	GAGTTTCACC	ATGTTGGCCA	GGCTGGTCTT	42600
GAACTCCTCA	CCTCAAGTGA	TCCACCCACT	TCGGCTCTCC	AAAGTGCTGG	
GATTACAGGC	ATGAGCCACC	ATGCCCAGCC	CCATCTCTCT	TTAAAAAACA	42700
AACAACAGCA	CAAAAAACAT	AAAAAGAAGC	AGAGAACACA	TACACATCTG	
CATCTTCCCT	TGTTTACTTA	ACAATAGATC	TTGGAAGTCA	CTTCTCAGTA	42800
GAGGCTAGGT	TGGGCAGAGC	ATTGGATTCT	AGGCCAGTGA	GTTTGGCACT	
GACCATGGAG	ACACTAGGAA	GCCCATGAAG	GACAGAGAGA	GATGCCCTCGA	42900
CCCTGCCAGT	CCTTTAGAAA	GATCACCCAG	TGCTTTTTGT	ATACCAAACC	
CTATTTGAAA	TACTTACGTA	TATTAACCCA	TTTCCTTATC	ACCACACACC	43000
TGCGGGAAGG	GAGATAGGCA	CTTTTATTAT	CTTCATTTTG	CAGATAGGGA	
CATIGAGGTC	CAGAGAGGTT	ATGTCACCTA	CTTAAGGTCA	CACAGCCAGG	43100
AAGTGGTAGT	AGGGACTCTT	ACCCTTGTGT	TACAGATGAG	ATTGAATTAT	
CTCAGAGAAA	CTCAGAAAGG	TTAAACAAC	TGCCTAAAGT	ACATACAGGT	43200
AATTAGTCTG	GGAGCCTGAC	GCATGTTGCT	CTAGCCTGGT	CACAGTTACA	
GAGGTGGCAA	GCAATGGCCT	GAACAGGACG	AACAACCAA	TACCCAGGCT	43300
GGTGGCTCTT	AAACATGGTG	GGGTACAGTA	ACGACAGCAA	CCAGGGTGGG	
CACGTGGTCC	CCTGCCCCCC	GGCTGGTGCC	CTAACATCTC	CCTTTCTCTC	43400
ACCAGTTCAG	AATCTATAAC	GTGACCTACC	TAGAACCCTC	CCTCCGCATC	
A					
[exon 7: 43406..					
CGAGCCAGCA	CCCTGAAGTC	TGGGATTTC	TACAGGCAC	GGGTGAGGGC	43500
CTGGGCTCAG	TGCTATAACA	CCACCTGGAG	TGAGTGGAGC	CCCAGCACCA	
AGTGCCACAA	CTGTGAGTAT	CAAGAGGCCT	AAGCAATGGT	AATCTCCACT	43600
..43562]					
CTCCATTCTT	CCCCTGTGGC	CAGACACTTC	CCCTGGCTGA	GTCTCTGGGC	
TTTTTATATCA	TAGGATGCCT	CTAATGGCAA	TCCTGCCATT	AGATACACCT	43700
GCTGTGCTGT	ATCTGCCAGG	TAGGCAGGCT	AGGCTCAGT	AACACACAA	
C					
CCCACAAATT	CCATGGCTTA	ACACTATAGG	AATATATTTC	TTGCTCATGT	43800
AACAAGCTAA	CGTGAATGTT	GCTGGTTTGT	AGGTGGTTTC	CCTCCCTGTA	
GAAATCTGGG	GAGTGAGGTT	CTTTCCATCT	TGTGGTGCCA	TCATTCTCCA	43900
GGACAAAGAT	TCTTACCTAC	TTTTGTGTCT	TGTTTTCTCT	TGGCAGCCTG	
GTGAAGCCTA	TGGACCTCAT	TTCAGAATAT	TTTTAAATAC	ATAAAATCCC	44000
AGGCTGGGCA	ATATAGTGAA	ACCCCATCTC	GTACAAAAT	TAGCCAGGCA	
TGGTGGCATG	CACCTGTAGT	CCCAGGTACT	GGGAAGCCTG	AGGTGGGAGG	44100
ATCACTTCTAG	CCGAGGAGTT	TGAGGCTGCA	GTGAGCCGTG	ATCGTACCAC	
TTTACTCCCA	CCTGGGTGAC	AGAGCAAGAG	CCCATCTCTA	AAAATAAATA	44200
AATACAATGA	AATAAATATA	AATAAATAGA	ACTACAGAGG	AAACTAATTG	
TATTGAAATG	CAGTTATAAA	ACATTTAAAC	ACATTTTAA	TCTAGAGATA	44300
TATGTGCTTC	TTTATTAAGA	TCTATAAATA	ATAAGTTCTA	GGGGTAGCTC	
GCATAAATAC	TGTAATTTCA	AAGTAGATAA	GCATAAATA	TACTTTATGA	44400
TACTGAATTT	GTGATGTGAT	ATGAGAATAG	CTGTGAGTTT	TGTTTTGCTG	
GGGACAGGAT	CATCTGATGT	GTCTTACTG	GGGTCTCTTC	CCTCCATTCT	44500
TTTTTTAAAA	TTGTATTTTA	TTTTATTTTT	AAAATTTTAA	AATAAATAGA	
GACAGGGTAT	CACATGTGTT	CCCAGGCTGC	TTTTGACCTC	CTGGCTCCTA	44600
GTGATCTTCC	CATCTTGGCT	TCCCAAAGTG	CTGGGATTAC	AAGTGGGAGC	
CAGTGTTCCT	GGGCCCCCTC	TCCATTCTTA	ATGGAAGGAG	ATGCTAGGCT	44700
TGAGAGGTTA	GGGAAAGTAA	AGATGTAATT	TCTTTCCCAT	CCAAGTTCTC	
AGACCCCTGA	ATTCTACCTG	CAGCCATGTT	GGTCCATCAA	CCCCAAGTGA	44800

FIGURE 1F

AGAAATCCCTG	CTCTAGGGCC	CCACCATTGT	CTGTATCCAG	CCAGCAGAAG	
AGGCGTGATT	ATGGAGATCA	CATCTGCTTC	TTGAAAGCAG	ACAGCCCGGA	44900
AGTGGGCGCG	ATCACTTCCT	CTCAAAATTCT	ATTGGTGAAA	ATGGTCACAT	
GACTACACAT	AGCCACAAAG	GAGGCTGGGA	ACTTTCTCAC	TTGGAACCTTA	45000
CATCCAGAA	ACAACCTCTT	TCAGTGAGGT	ATCCCCACAG	TCTTTCCGAG	
TAGAAATATT	GATTATCTCA	CATAAAATGA	AGTCTTACAA	ATGGACCTAC	45100
TGGGTTTTGT	ACAGCAGCCA	AGTGATATCT	CTTCCCCTTC	GCTGTCTTCC	
CTTCTGCCCT	CCTTCACATG	GTGGCATTGT	ATCCTTAGAC	TGTGCCACCCA	45200
TGCCCTCAGG	TGGGCCGTGG	CACACTGTCT	TACATAAAGC	AGGAAGGAAA	
GGAAAGGCTG	CTACGAGAGA	GTGTACCTTG	TGCACTCTCT	TTTTAATCAG	45300
GAAGCAAACA	TCTTCTTAGA	AGCTTCCTTA	GCAAAATTCC	CCTTACATCT	
CATTGGCCAA	GACTGTTACA	TGTTACATGG	TTACTGTTAT	TACTTGCTCA	45400
TTGCAAGGAA	GACTGGGAAC	TCAAATGCCT	GGAAAAAGGA	ACAGGATAAT	
CGTGATTGGC	TCAAGCCTTA	GGGTGGGCAT	GGCTCCCTGA	CAAGGGAGAG	45500
AGGAAAAAGC	TGTTGAGTGA	AGAAGACTGC	TTCAAGTTCC	CCATCTGTAT	
AATGGGAGGA	GTAAGGGCTG	TCGTGAAAAC	TCAATGAAAG	AGATTCTTC	45600
AACCTGTAGT	GTGCAGTGGC	AGCTGGCAGT	ACCCTGACCC	TGCCACC CGCA	
CAGCCCTCTC	AGCATTGTCT	ATCCTGCACT	GTGGATATCA	GTTGAGCCAC	45700
GTGTCTCTCG	CCCTGGGCTG	TGAGCTCCAT	AGGCAGGGTC	TCCATGGCTG	
TATCTCCAGA	ACCCAGCACA	GAACCAGGTG	CTTGGGAAAG	TTTTGAATTG	45800
ATTCTCATCT	GCCATTGGCA	TGGGGAAGGG	AAC TAGCTTG	TATGAAACAG	
ATAACAATGT	ATGGGACCTT	CATTCAATTAT	TTCAAGCAAT	ATTTGCTGAG	45900
TTCTCTCTAC	ATGGCTAGCC	CTGTGCTAGA	CACCTGGGAA	TCGGCGATGA	
ACAAGAGAGA	TAGAAATCCC	CACCTCTGTG	GAGCTGACAT	TCTGGAGGAG	46000
GAGACAAAAA	GCAACATAT	AAAGAAAGAA	AGAAATCACA	TGGATCTGGA	
TGACAGTGA	TGCTGGGAAG	AAAATAAAAG	CAGAGGAAGG	GGATGGAGCG	46100
ATGGGCGAGG	GGCAACGGTA	GGGAGGGTGT	CGGGGAAAGT	TTTTTGAGAG	
ATGTGAGCAT	GAAAGTGAAC	AAGGAGAAGT	CAACCGTGTT	GAGATGATGG	46200
CAGCTAATGA	TGTGGACAGG	CCACTCTGTT	CTGAGTGCAT	TATCTATTGA	
TTCACTCATGT	CATCCTCGCA	ACAGCCCTGC	ACGATCAATT	CTGTCAATTAA	46300
CCCCATAGTA	CAGATGAGGA	TGCGGAGGCA	CAGAGAAGAT	AAGGGCACTG	
TCCTGTGTCA	CACAGCAAGG	AGCCATCCGG	CTCCTAAGTT	GGTGCATTTG	46400
ACTTCTGTGC	TTCCGGAAAG	AAAGAGCAGC	AAGTTTAAAG	TCTGGAGGTG	
GCACTGAGCT	TTGGAGGAGC	AGGGGGCAAT	GAGGTGGCCG	GTGTGACGAG	46500
GACTCAATGT	GCAAGAGGGA	GAGTGGTGGG	GAGATGAGGT	GGAGGGGTGG	
TCGGCGGTCA	GATCGTGGAG	GGTCTCGGAC	GAGGGTCTCT	ACCTTGGGTC	46600
TCCAGTCTGT	GGAAGTGGAG	CCCAGGCTGT	ACCATGGCTG	ACCTCAGCTC	
ATGGCTTCCC	CTCCCACTTC	CAGCCTACAG	GGAGCCCTTC	GAGCAGCACC	46700
[exon 8: 46674..					
TCCTGCTGGG	CGTCAGCGTT	TCCTGCATTG	TCATCCTGGC	CGTCTGCCTG	
TTGTGCTATG	TCAGCATCAC	CAAGTGAGTC	CTGGGCCAG	TGCTGCCGAG	46800
..46773]					
CAGTCCCTCT	GGAGTGCAGG	GTGGCAGGGA	CTTGCCCTTC	TAGTCTGCC	
CTTTGCAGTC	CTCTCAGTCA	ATAATACGTA	TTTACTGAGC	AGCTACTACA	46900
CACCTTGAGA	GTAGAGCTGA	GAACATATCG	ACAAGGACCC	CACCTTTTTT	
TTTTTTTCTT	TTTTTTTTTT	TTTTGAGACG	GAGTCTCACT	CTGTCAACCA	47000
GGCTGGAGTA	TAGTGGCACA	ATCTTGCCCTA	ACAGTAACCT	CGCCTCCCG	
GGTTCAAGCA	ATTCTTCTGC	CTCAGCCTCC	AGAGTAGCTG	GGATTACAGG	47100
CGCATGCCAC	TATGCCCGCG	TAATTTTTTG	TATTTTTGGT	AGAGATGGGG	
TTTCAACATG	TTGGTCAGGC	TGGTCTCGAA	CTCCTGACCT	CATGATCTGC	47200
CTGCTCAGC	CTCCCAAAGT	GCTGGGATTA	CAGGTGTGAG	CCACTGACCC	
CAACAGCAGC	TCACATTTT	TAAACCCGGC	ATCCTACTGG	GGAGACTGAA	47300
AATACATATC	AATCACAAC	AGGTGGTTTT	CCATAGTGAC	CCACTCTCTG	
AATGCACTAG	ACCAGGGTGG	AGGCCAGAGA	TCTTCTGGGG	TGCTTTTTGG	47400

FIGURE 1G

AAGGGGGACC AGGATAAGGC TCTCCAAGGA GGGAAATTT GAGGGGGGCC  
 CTGACTGGGG AGAATGAGCT GGCAGGGAT AAGCAAGATG GAGTCATCCC 47500  
 ACATCCCCIT ACAACACTGG GTGCCCTGGG AACTGGGGGC ATTTGGGGGC  
 ATGTGGTAGG AGCCAGAGGA ATTTGCGACG ATTGCCCTGA TGGAGTCAGG 47600  
 AGACCTGGGT TTGAATCCTG GCCTTGGAGC TTGGTAGCTG GCGGCCGACA  
 AGTTGCTGAA ACCCCTGAGC CTGGGGTTCC TGCTTTGCAG AGTGACAGTG 47700  
 ATGGTGAGAA CATATTTTCAT CAGCCAGAAG AGGCCAAATC ACAGTAAAGG  
 CTGAGGGAGG AGATGAGTGG CGAGTGGCTG GGAGGTGGTG GAAGGAGCCT 47800  
 CGTTTCCAGA GAGCTCTTGC CAGCCCTTGG AATCATGGTG TCTCAGAGCC  
 TCAGTCTCTC CATCTCTGAA ATGGGACTAG CAAGCTCAAC CTCACTAAGT 47900  
 CAGGATTAGA GGTGGCTAAG GATTATTAC ATGATTGATG AAAGTGCCCA  
 CTCTTTGGCCC AGCACACACT AGGTAGGCAG GGAATGCAAA TTCCCCTCCA 48000  
 TATCTTGTCA CTGATGCCTC CGAGCAACCT TGGACTGATC GCCTTGCTCT  
 GAGCCTCAGT TTCCCCTACA CCTGTACCTC TTCCCCTCC CCATCACTAT 48100  
 ATCCCAGCAT GCCAGCCTCT TTGCTGTCTT TTGCTTTGG TTTCTTGTIT 48200  
 TGTTCGTGTT TTTAGACAGG GTCTCACTCT GTTAGCCAGG CTGAAGTGCA  
 GTGGCGCGGT TACGGCTCAC TGCAGCCTCC AATTCCTGGG CTAAAGAGAT 48300  
 CCTCCCATTT CAACTTCCAG AGCAGCTGGG ACAACAGGCG CTTGCCACCA  
 CACCTGGCTA ATTTTCTTAT TTTAATTAA TTTTATTTTA TTTTGGGA 48400  
 CAGAGTGGAG TCTCAAAAC CAAGCTAGAG TGCAGTGGTG CGATCTCGAC  
 TCACATGCAAT CTCTGCCCTC CGGGTTCAAG CGATTCTCCT GCCTTAGCCT 48500  
 CCGGACTAGC TGGGATTACA GCGGTGTGCC ACGACACCCA GCTAATTTTT  
 GTATTTTAG TAGAGATGGG GTTTCACCAT GTTGCCACGA ATGGTCTTGA 48600  
 ACTCCTGACC TCAAGTGATC CACCCACCTC GTTCTCCAA GTTCTGGGT  
 ACAGGCATGA GCCACTGTGC CTGGCCAATT TTCTTACATT TTGTAGAGAC 48700  
 TGGCTGTAC TTATGTAGCC CAGGCTGATC TTGAACCTCT ACCCCTTAT  
 CTTTATTCAT GGCACCTTAT ACCATGAATG AATGACCTCA TATAAGCATT 48800  
 TCTTTCTGTT TTTTTTTTTT TTCTTTGAGA TGGAGTCTCA TGTTGTCCCC  
 CAGGCTGGAG TGCAGTGGCG CGATCTCAGC TCACTGCAAC CTCGCCCTTC 48900  
 CGGGTTCAAG CGATTCTCCT GCCTCAGCCT CCTGACTAGC TGGGATTGCA  
 GGCGCCTGCC ACCATGCCTG GCTAAGTTTT GCATTTTTAG TAGAGACGGT 49000  
 GTTTCACCAT ATTGGCCAGG CTGGTCTCGA ACTTCTGACC TCAGGCGATA  
 CACCTGCCTT GGCTCCCAA AGTGCTGGGA TTACAGGCGT GAGCCGCCAT 49100  
 GCCTGGCCTC ATATAAGCAT TTCTGTCTCC ATTTATCATC CATCTTTCCC  
 TCTTGAAGGT CAGTTTCACC AAGGCAGGCA TCTTTGTCTC GTTCACTGTT 49200  
 GTAGCCTCAG GGCCAGGCAC AGTGAGTCAA ACATAGAAGG TGCTCAATAA  
 ATATGTGTTT ATTTATTGAA ACCATGGGCA GAGGCTAATT CAGAAGCGGT 49300  
 CTGAGGACCT TACCTCCCAG TGATGATGCA CCATGGCCCC AGGCAGGCCA  
 GGAAGAGAGA AGGGTTGTGT TTCTCCGTAG GTCCCCAGC TTCCCCAGGC 49400  
 ATCCCAGGCC ATTCCTGTGT CATTTGCCCT CAGCTGCTCT GAAAAAGGGA  
 TTGTTGAGGG GAACCTAGAA TCCTCTCTCT GCAGTTTGA TCTTTCTCAA 49500  
 TCCCCTGGGG TCTCATTCCT ACTGAGGACA TAGGTGGCCT CCTCAGGACG  
 TCTGTGCTGG GTAACAGAAT GCGGGAGTGT GAACCTGGCT CTGCCACCTA 49600  
 CCAGCTGTCA CTCCACCTCC TTGGGCCCTCA CTCTCCTCAT CTGTAGAATA  
 GGGTTAGCAA TAGAATCCAT GTCACCAGGT TAGAATGATG ACTCAGTGGT 49700  
 TTGACCTCCA GAACTAATC AGCCTGATCT CTGATGCCAA ATAAGTATTG  
 GTGATAACGA CCACTTTTAT GGGAGGAGCG TTCACTGTCT AATAATTCAG 49800  
 AGATCAACAC CTTTTCTTTT TGTTTTTTCA GATTAAAGAA GAATGGTGGG  
 [exon 9: 49781..  
 ATCAGATTCC CAACCCAGCC CGCAGCCGCC TCGTGCTTAT AATAATCCAG  
 GATGCTCAGG TAGGAGTAGG CGTGATGAG GACATGTGGG ACTGTGTACA 49900  
 ..49859]  
 TGAAGAAGTG TGTTTCAGAA CACCTGGGCT GTTAAGGACC TCACTGGCT  
 TCTGGAATGG CAAATAGACA GTCAGGAGGG TTGCAAGGGA GACAGAGGCA 50000



GAAGCCGAAT	GAGGTCATTA	GCAGACCAGA	GGCTTCCCCG	CCCTTCCCCT	
TGGCAATCCC	AGCCTGGGGT	GGGCTTCTCT	GGGGTTGGTT	TCCTGTTTTT	50100
TTCCCTCCCC	TTGGGAGAAAT	GACCCTTGGG	TCATCATCAC	TGTGTCATTC	
CCTGGGGAGG	TGCCAGTACC	AGGGCTAGAG	GCCAGAAGGA	GTGGAGGAAG	50200
GAGAGGGTGA	CAGGCTTTCT	GTGTCTTCTT	CTTAAGCATA	GGAAACTGCC	
CCCGAAGCAC	TAGCAAAATCC	CTTCCGGGTT	CTCATTTGCC	TGAAATGTAT	50300
CCCACCCCTA	AGCCAGGGGT	GGAGTCAGCT	TCCCCAAGGC	GATGGTCCTG	
TGGGTGAGTG	GGTGGGGTTT	GCCTGAGCAA	GATGAGAGTT	CTCTAGTAGT	50400
GAGAAAGGGG	GATTATAGT	CCTGTCTAGA	AGAGAAGGTG	TCAGGGTCCT	
TGCTTTTCCA	GGGACTCTGG	AATCTAGTGT	TGGCTTTGAA	TCCTGACTCT	50500
GCCACTCACT	GGCAGTGTGG	ACTTGAGCAA	GTGCTTAAT	TCTCTGAGCC	
TCAGTTTCCCT	CTTGTGGGTT	ATAACAGTGT	TTACCTGGTA	GGACAGATAT	50600
TGGAATTTAT	TGAGACAATA	CATATAAAGT	GCATATTTCA	GCCTCTTGCA	
AATACCAAGT	GCCATTATG	TATCAGTTAG	TGTTTGCTGT	GTAACAAATG	50700
ACCCCGAAAT	GTAGAGGGTT	ACAACAACTT	TATTTAGCTT	ATGCTTCTGC	
AGGCTGGCAT	TTGGGGCTGG	GCTCAGCAGT	AGGGGTGGCG	GGGGAGGCTG	50800
GGCTGGGCTG	GGCTGGGCAG	ATCTGAATTG	AGCTGACCCG	TCCCCTGAGC	
CTCCCTCCGT	GTCTGACAGT	TGGCTTTTTT	TTTTTTTTTC	TTTTTCTGAG	50900
ACGGAGTTTT	GCTCTTATTG	CCCAGGAGTG	CAATGGCATG	ATCTTGGCTC	
ACTGCAACCT	CTGCCTCCTG	GGTTCAAGCA	ATTTTCTTGC	CTCAGCCTCC	51000
CAAGTAGCTG	GGATTACAGG	CATGTGCCAC	CACGCCAGGC	TAATTTTGTA	
TTTTTAATAG	AGATGGGGTT	TCTTCATGTT	GGTCAGGGCTG	GTCTGGAAC	51100
CCTAATATCA	GATGATCCAC	CCACCTCAGC	CTCCCAAAGT	GCTGGGATTA	
CAGGCGTGAG	CCACTGCACC	CAGCCTAGTT	GGCTGACTTT	TACCTGGGAC	51200
AGTGCAGGTG	CCTGAGCCAT	GTGCCCTCTCA	CTCTCCAGCA	GGCCGGCCCCA	
GGCTTGTTTA	CAGAGTGGCT	CAGTTTTCAA	GGGTGGGAAG	TCCCAAGGCT	51300
TCTTGGAGCC	TAGGCCGACG	ACTGGCATTA	TATCACTTCC	ATCACATTCT	
ATGGGCCCAA	GCAAGTCCCA	GGGCCAGTGT	AGATTCAAGG	GATGGGAGGA	51400
GATTTCAGAG	ACTCCTCTGT	GGCCACTTTT	GCCATCGACC	ACAGTCCCTG	
TAAATATTAG	GACAATGTAA	TTAATTCCCA	GGAATCTGAG	GCTCAGAAAG	51500
CGTAAGTGAC	CTGTTGGACT	TCTGATCTGT	GTGATGTCGA	GGCTTGTACC	
CCTTCTCTGAG	CATTGCCGTA	CTCCAGGCCG	GGCTGCAAGG	CCACTCTGCT	51600
CTTTCACTGG	CTGTCTCTGT	ATTTTAGGGG	TCACAGTGGG	AGAAGCGGTC	
[exon 10: 51628..					
CCGAGGCCAG	GAACCAGCCA	AGTGCCCCGA	TGTATCTGAA	CTTAGGTCAC	51700
..51677]					
AGCCTGCATG	CATTGGGAAG	GTGATAGAAT	TGGAGAGGCA	AGCCCCTAGC	
TCCATGTCTG	CCTTCTCTTC	CCTGCATTGC	GTAATTGCCC	TGTGACATTA	51800
GCCTTCAAGG	GACGGCAGGA	GGAGGGGTGT	TCTGGAACG	TGGACTGCTG	
GCCAAAGCCC	CTGAGTTTCA	CTGGTGTGTC	AGGTACATGG	TGATACCCCT	51900
TGGGAGTGCT	GTATATAGTTA	ACAACCAGAG	CAGCCGTGCC	TGTTTGTAAA	
ATCTTGACCT	AATTGTATAC	TTGTGCGCAA	ATAGCCACTA	TCTTGAAAC	52000
TCCCCTCCTT	TTTTTTAATA	TACAGGATCT	CACCTGTGGG	CCCAAGGCTGG	
TGTGCAGTGG	TGCGATCATCA	GCTCACTGCA	CCTCAAAC	CCTGAGCTCA	52100
AGTGATCCTC	CCATCTTAGC	CTCCCGAGTA	GCTGATACTA	CAGATGTGCA	
TTACCACGCC	TGGCTATTTT	AAAAGGTTTT	TGCCCTGTAAT	TCCAGCTACT	52200
CAGGAGGCTG	AGGCATGAGA	ATCACTTGAA	CCCGGAGGC	AGAGGTTGCA	
GTGAGCGCAG	ATTGTGCCAC	TGCATCCAG	CCTGGGCGAC	AGAGTGAGAC	52300
TCTTGTCTCA	AAAAAATAA	TACCAAAAAA	AGTTTTTGTA	AAGACAAGCT	
CTGCGTGTGT	TGCCCCGCCA	CTGTGGCCTC	CTTAGCTTCT	TCCCTGGGGC	52400
CTGTCTGGAC	TTTCCATATT	CCAGAAACTA	AAGGGGGTCC	AGGACCCTGC	
TTCAACCCCTA	GGATCCCGCA	TCTTTTTTTT	TTTTTTTTTT	TTTTGGACGC	52500
AGGGTCTTGC	TGTGTCCCTC	AGGCTGGAGT	GCAGTGATTC	ACTGCAAGCT	
CAAACCTCGTG	GGCTCAAGTG	ATTCTCTAGC	CTCAGCCTTC	TAAGTAGCTG	52600

FIGURE 11

GGACTACAGT	CATACACCAA	CATGCCACAG	TAATTTTCCT	TTTTTTTAAT	
TCTTGTAGAG	ATGTTTGAGA	CGCTTGGGCG	TCTGTGCCCC	AGGCTGTTCT	52700
CAAACCTCCT	AGCTCAAGCG	ATCCTCCCTC	CTCAGCCTCC	TAAAGTGCTG	
GGATTACAGG	CGTGAGCCAC	CGCACC CGCG	TCCCATATCC	TTTCTAATTG	52800
GTCTATGGCT	GGGATAATGG	TGTTGCTTTT	AATTATCATC	ATCCATAAAG	
ACTTTTCTTT	ACTCAACAGA	TCTGAGCTTG	TATTTGGTGC	CCAGGACATG	52900
TGCTGGGTTT	CCGAAATCCC	AAAGACACAG	ACCCTACCCT	CAGGGATTTT	
TCATTTCTAGC	AACATAGACT	GATCAATTAC	TGATTATAAC	GTTAGAAGGC	53000
ATGTCTGAAG	TAGACAGCCA	TCAGGACATG	GTGATTTTCAG	GCTGGGCTTT	
C					
GAAGAATGAA	TAGGAGTTTT	TCAAGTGTCT	AAACTGAACC	CTGACCAACC	53100
T					
TTTGCTTTTG	CAGACACTGG	AAGAATTGTC	TTACCAAGCT	CTTGCCCTGT	
[exon 11: 53114..					
TTTCTGGAGC	ACAACATGAA	AAGGGATGAA	GATCCTCACA	AGGCTGCCAA	53200
C					
AGAGATGCCT	TTCCAGGGCT	CTGGAAAATC	AGCATGGTGC	CCAGTGGAGA	
TCAGCAAGAC	AGTCCTCTGG	CCAGAGAGCA	TCAGCGTGGT	GCGATGTGTG	53300
GAGTTGTTTG	AGGCCCGGCT	GGAGTGTGAG	GAGGAGGAGG	AGGTAGAGGA	
AGAAAAAGGG	AGCTTCTGTG	CATCGCCTGA	GAGCAGCAGG	GATGACTTCC	53400
AGGAGGGGAG	GGAGGGCATT	GTGGCCCGCG	TAACAGAGAG	CCTGTTCTCT	
C					
GACCTGCTCG	GAGAGGAGAA	TGGGGGCTTT	TGCCAGCAGG	ACATGGGGGA	53500
T					
GTCATGCCTT	CTTCCACCTT	CGGGAAGTAC	GAGTGCTCAC	ATGCCCTGGG	
C T C					
ATGAGTTCCC	AAGTGCAGGG	CCCAAGGAGG	CACCTCCCTG	GGGCAAGGAG	53600
CAGCCTCTCC	ACCTGGAGCC	AAGTCCTCCT	GCCAGCCCGA	CCCAGAGTCC	
AGACAACCTG	ACTTGACACG	AGACGCCCTT	CGTCATCGCA	GGCAACCTTG	53700
CTTACC GCAG	CTTCAGCAAC	TCCCTGAGCC	AGTCACCGTG	TCCCAGAGAG	
C					
CTGGGTCCAG	ACCCACTGCT	GGCCAGACAC	CTGGAGGAAG	TAGAACCCGA	53800
GATGCCCTGT	GTCCCCCAGC	TCTCTGAGCC	AACCACTGTG	CCCCAACCTG	
AGCCAGAAAC	CTGGGAGCAG	ATCCTCCGCC	GAAATGTCCT	CCAGCATGGG	53900
GCAGCTGCAG	CCCCCGTCTC	GGCCCCCACC	AGTGGCTATC	AGGAGTTTGT	
T					
ACATGCGGTG	GAGCAGGGTG	GCACCCAGGC	CAGTGCGGTG	GTGGGCTTTG	54000
GTCCCCCAGG	AGAGGCTGTT	TACAAGGCCT	TCTCAAGCCT	GCTTGGCCAGC	
AGTGCTGTGT	CCCCAGAGAA	ATGTGGGTTT	GGGGCTAGCA	GTGGGGAAGA	54100
GGGGTATAAG	CCTTTCCAAG	ACCTCATTCG	TGGCTGCCCT	GGGGACCCCTG	
CCCCAGTCCC	TGTCCTCTTG	TTCACCTTTG	GACTGGACAG	GAGGCCACCT	54200
CGCAGTCCCG	AGAGCTCACA	TCTCCCAAGC	AGCTCCCCAG	AGCACCCTGGG	
T					
TCTGGAGCCG	GGGGAAGAGG	TAGAGGACAT	GCCAAAGCCC	CCACTTCCCC	54300
AGGAGCAGGC	CACAGACCCC	CTTGTGGACA	GCCTGGGCAG	TGGCATTGTC	
TACTCAGCCC	TTACCTGGCA	CCTGTGCGCG	CACCTGAAAC	AGTGTCATGG	54400
CCAGGAGGAT	GGTGGCCAGC	CCCTGTGCAT	GGCCAGTCCT	TGCTGTGGCT	
GCTGCTGTGG	AGACAGGTCC	TCGCCCCCTA	CAACCCCCCT	GAGGGCCCCA	54500
G					
GACCCCTCTC	CAGGTGGGGT	TCCAATGGAG	GCCAGTCTGT	GTCCGGCCCTC	
CTCTGGCACC	TCGGGCATCT	CAGAGAAGAG	TAAATCTCTA	TGATCCTTCC	54600
ATCCTGCCCC	TGGCAATGCT	CAGAGCTCAA	GCCAGACCCC	CAAAATCGTG	
C					

FIGURE 1J

		11/15	
AACTTTGTCT	CCGTGGGACC	CACATACATG	AGGGTCTCTT AGGTGCATGT
		C C	
..54692			
CCTCTTGTG	CTGAGTCTGC	AGATGAGGAC	TAGGGCTTAT CCATGCCTGG
		T	
GAAATGCCAC	CTCCTGGAAG	GCAGCCAGGC	TGGCAGATTT CAAAAGACT
		G	
TGAAGAACCA	TGGTATGAAG	GTGATTGGCC	CCACTGACGT TGGCCTAACA
CTGGGCTGCA	GAGACTGGAC	CCCGCCAGC	ATTGGGCTGG GCTCGCCACA
TCCCATGAGA	GAGAGGGCA	CTGGGTCGCC	GTGCCCCACG GCAGGCCCCCT
GCAGGAAAAC	TGAGGCCCTT	GGGCACCTCG	ACTTGTGAAC GAGTTGTTGG
CTGCTCCCTC	CACAGCTTCT	GCAGCAGACT	GTCCTGTGTT TAACGTGCCA
AGGCATGTTT	TGCCCACCAG	ATCATGGCCC	ACATGGAGGC CCACCTGCCT
		G	
CTGTCTCACT	GAAGTAGAAG	CCGAGCCTAG	AACTAACAC AGCCATCAAG
		A	
GGAATGACTT	GGCGGCCTT	GGGAAATCGA	TGAGAAATTG AACTTCAGGG
AGGGTGGTCA	TTGCCTAGAG	GTGCTCATTC	ATTAAACAGA GCTTCCTTAG
GTTGATGCTG	GAGGCAGAA	CCCGGCTGTC	AAGGGGTGTT CAGTTAAGGG
GAGCAACAGA	GGACATGAAA	AATTGCTGTG	ACTAAAGCAG GGACAATTTG
		A	
CTGCCAAACA	CCCATGCCCA	GCTGTATGGC	TGGGGGCTCC TCGTATGCAT
GGAACCCCCA	GAATAAATAT	GCTCAGCCAC	CCTGTGGGCC GGGCAATCCA
		T	
GACAGCAGGC	ATAAGGCACC	AGTTACCTTG	CATGTTGGCC CAGACCTCAG
GTGCTAGGGA	AGGCGGGAAC	CTTGGGTTGA	GTAATGCTCG TCTGTGTGTT
		T	
TTAGTTTCAT	CACCTGTTAT	CTGTGTTTGC	TGAGGAGAGT GGAACAGAAG
GGGTGGAGTT	TTGTATAAAT	AAAGTTTCTT	TGTCTCTTTA TTTTTTATGT
ATTAACCAAA	CATACCTCCA	GACACTGCTG	TGAGTGCTGT GTCTCTGTTA
ACTCCTGGAA	TTACCCATC	CAGAGGAACC	AGGATGCAAG AGGTTAGAA
ACTTGCCGTC	TGGGTTTGGG	TTCCCCATAC	AAGGATTCAA ATAGTTGATT
		A	
TAGGAAGTAA	TCCCGGGAAA	CCCTGCTAAG	GTAGTGGGGA ACTGAGGCAG
GGAAGGACAC	AAACCAAGAA	AGTGTTACCT	GAAAGGGGTC CAGATGCAGA
CCCCAAAAGA	GGGTTCTTGA	ATCTCATGCA	AGAAAGAATT CAGAGCGAGT
CCATAGAGTC	AGTGAAAGCA	AGTTAATGAG	GAAAGTAAAG GAATAAAAAGA
ATGGCTACTC	CGTAGACAGA	GCAGCCCTGA	GGGTTGCTGG CTGCCTATTT
TTATGGTTAT	TGATTAATTA	TATTCCAAAC	AAGGGGTGGA TTATTATGCC
TCCCTTTTAG	ACCATATAGG	GTAACCTTCT	GATGTTGCCA TGGCATTGTT
AAACTGTGAT	GGCGCTGTTG	GGAGTGAGC	AGTGAGGACA ACCAGAGGTC
ACTCTGTGTT	CCATCTTGGT	TTTGGTGGGT	TAGAGCCATC TTCTTTACTG
CAACCTGTTT	TATCAGCAAG	GTCTTTATGA	CTTGATATCG TGACGACCTC
CTGTCTCATT	CTATGACTAA	GAATGCCATA	ACCTCCAGG AATGCAGCCC
ATGAAGTCTC	AGCCTCATT	TACCCAGCCC	CTCTTCAAAG CTCACAGTTA
AATAAACCTC	TGACAAAAGG	GTGAGTTATT	CAACAGATTA CCAGCATGAG
TAACATGATC	TTACCTGCCC	GGGATCTCTG	GAAAGACCAT CATGGCACAT
GCCCAAGTTAT	GCCTGCAAAAG	GAGAGGGAGC	TGGGGTATTT GTCCACAGC
TCCCATCTGT	CATTGGCTGA	GAGCTGCTTC	CAGGAGCATT AATTCTCCAG
CACCTCCAGC	TACTCCAGCA	AAAAAAAAT	TCTTCAACTG AGAGTTGGAG
GTGTTGAGAG	ACTCTGGGAC	ACCAAGAAGA	CAGGAACAGG ACACCAACAG
TGGCTGATGA	TACACTGCCA	AGGTCACACA	GCTAGTTAGC AACAGATCTA
TAGTGAATC	CAGACAGTGT	CTCCATCACC	CAGGCTCTCT GTAGTGATCT
GCGCTTCACA	TCCGAGGCAG	GCAGAGGGAT	GGTGTGGGCC TTAGATGGGA

FIGURE 1K

AGGCTGGGAA	CCTGAAGCTC	CTATGTCTGT	ATCACTTTTG	CTTCTCTGAG	56900
TAGCTGCCCT	GATTTTCACAC	TTGAGGGGCT	TGSCCATTTT	AGATTCCTTC	
CTGCTCTAGG	AGCCTACATA	CTACACTGGA	AATGATGGGG	AGCTCTCTAC	57000
CTCACATGCA	GCCTGATGTT	TGTTAGAAAC	ACCTCCTTGC	GCCAGGCATG	
ATGGCTCATG	GCTGTAATCC	CAGCAATTTG	GGAGGCTGAG	GCGGGTGTAT	57100
CACCTTGAGT	GAGGAGTTCA	AGACCAGCCT	GGCCAATATG	GTGAAACCCCT	
ATCTCTACCA	AAAAATAAAA	AATTAGCCGG	GTGTGGTGGT	GGGTGCCTGT	57200
AATCTCAGCT	ACTTGGGAGG	CTGAGTTGGT	AGAATTGCTT	CAACCTGGGA	
CGCGGAGGTT	GCAGTGAGCT	GAGATTGTGC	CATTGCACCT	CAGCTTGGAT	57300
GACAGAGTGA	GACCTGTCT	CAGGAAAAAA	AAAAAAAAC	AAAAAAAACC	
TTGTTCTAAG	CCAAAATCAA	TCCCTTTAGC	TGCCCAATC	ACACAGTTTA	57400
CAGATGGAGA	AACAGTTTTA	GAGAGGAAAA	GGGACTTGCC	CAAAGTCACC	
CAGAGAAATG	CAGAGCCTGA	ACTAGCCTTC	TGGACTTCTT	GCCTCCAAAA	57500
GCTCTTTATA	ATAAAATATA	ATTTTAAATA	AAAATAGTTA	TCTGTTTAGG	
GCCAAGCAAT	ATGCTAAGTG	CCGTCCAGCC	ACTGTGTCT	TTACGTCTCC	57600
AAACAGCTCT	AGTTGGGAGG	CTCAATGATT	ATCCCAATTT	TACAGATAAG	
GAACACAGGT	CAGAGAGGTT	GAGGATTAGC	CTAGAACCAC	ACAGCTAGGA	57700
AATCCTGGAG	CCAGGATTTG	AACCCGGGTC	TGACCTAAGA	GCTCCCAGCC	
GCCGTGATAT	ATCAGCTTAT	GTCATCCTGA	CACCTACGCA	GATGTCGGCT	57800
CGAATCCACT	TTGCCTGAGC	ATTGTCTCAG	AGAAATCTAA	TTTAAAAATT	
AGGCAGCAAA	TAGAAAATAT	ATTTGACTGC	TAGAGATGCA	ATGGGACTGG	57900
GAGCCCAACA	AAGGATCTTA	GGCAAAAGAA	ATCCAAGTTG	TTGGCCTCAG	
CAACTATTAC	TGAAGTGGCT	GGGCTTTGGG	AAGCTACAGA	GGGATGAGAA	58000
GACCTGGTGG	ATCAGGTGGG	CCCAACTCAG	GCTGGCCCCC	ACCCTGCAGG	
AAGTAGGAAA	AGTCCAGGCT	CATAGGCCCA	GTGAGATGCC	GGCTGCGGGA	58100
GTTTCAGCCT	CCGGGGCTGG	ACCAGAGGGC	AGGAGGGGAC	GCCCTGGGTT	
AGCAGCGCCA	GAGTGGGCTG	AGTGGCCTGG	GCCCTGCGG	GGGAGCTTTC	58200
AGAGATGTTG	ATTGGGGGTT	ACTCCCTCAG	CCCTGCCTTT	ACACAGAATT	
TGTGGGGGAT	GAGGGGAGGG	GGAAAGGGGG	GAGGAAGGCA	GTGAGTGAT	58300
CTGAATTTTT	TTTTTTTTTT	TACAAAAAGT	GGCTTATTGC	ATTTTTCTGA	
TTACTCTATC	AGCACGTGCA	GACCTTTTCC	TATTCAGAGA	AAGCCTGAAG	58400
ATATAAAGAG	GAAAGTGAAG	AAAAACCACC	GGAAATCCCA	TCCCCGCCCC	
AGCATCTGGC	ACTGTGTGGG	CGATCACGAA	ATGAGCGCTT	GTTTTTGAAG	58500
GCGTAGTATC	TCCGTGAACA	TCCGTTTGAA	CAACCTTTCT	GACTTTATTT	
TTCCCACGAA	AGTTATTAAAT	TAAAAACAA	AAAGCAAAC	ACCGAAAAAA	58600
CAAAAAACCC	AGCAAGTGTT	TGAGCTCCCA	CCACGAGGGA	GGCCTGACGT	
CACTGGATCC	TCCCGGCAGC	CGATGAGGCT	GCATGGGACT		58690

FIGURE 1L

POLYMORPHISMS IN THE CODING SEQUENCE OF IL4R $\alpha$ 

ATGGGGTGGC	TTTGCTCTGG	GCTCCTGTTC	CCTGTGAGCT	GCCTGGTCTT	
GCTGCAGGTG	GCAAGCTCTG	GGAACATGAA	GGTCTTGCGAG	GAGCCACCT	100
GCCTCTCCGA	CTACATGAGC	ATCTCTACTT	GCGAGTGGAA	GATGAATGGT	
CCCACCAATT	GCAGCACCGA	GCTCCGCCTG	TTGTACCAGC	TGGTTTTTCT	200
GCTCTCCGAA	GCCACACGCT	GTATCCCTGA	GAACAACGGA	GGCGCGGGGT	
	G	T	A		
GCGTGTGCCA	CCTGCTCATG	GATGACGTGG	TCAGTGCGGA	TAACATATACA	300
			C		
CTGGACCTGT	GGGCTGGGCA	GCAGCTGCTG	TGGAAGGGCT	CCTTCAAGCC	
CAGCGAGCAT	GTGAAACCCA	GGGCCCCAGG	AAACCTGACA	GTTACACCCA	400
ATGTCTCCGA	CACTCTGCTG	CTGACCTGGA	GCAACCCGTA	TCCCCCTGAC	
AATTACCTGT	ATAATCATCT	CACCTATGCA	GTCAACATTT	GGAGTAAAA	500
CGACCCGGCA	GATTTCAGAA	TCTATAACGT	GACCTACCTA	GAACCCCTCC	
T					
TCCGCATCGC	AGCCAGCACC	CTGAAGTCTG	GGATTTCTTA	CAGGGCACGG	600
A					
GTGAGGGCT	GGGCTCAGTG	CTATAACACC	ACCTGGAGTG	AGTGGAGCCC	
CAGCACCAAG	TGGCACAAC	CCTACAGGGA	GCCCTTCGAG	CAGCACCTCC	700
TGCTGGGCGT	CAGCGTTTCC	TGCATTGTCA	TCCTGGCCGT	TGCGCTGTTG	
TGCTATGTCA	GCATCACC	GATTAAAGAA	GAATGGTGGG	ATCAGATTCC	800
CAACCCAGCC	CGCAGCGCC	TCGTGGCTAT	AATAATCCAG	GATGCTCAGG	
GGTCACAGTG	GGAGAAGCGG	TCCCAGGGCC	AGGAACCAGC	CAAGTGCCCA	900
CACGTGAAGA	ATTGTCTTAC	CAAGTCTTTG	CCCTGTTTTT	TGGAGCACAA	
			C		
CATGAAAAGG	GATGAAGATC	CTCACAAGGC	TGCCAAAGAG	ATGCCCTTCC	1000
AGGGCTCTGG	AAATCAGCA	TGGTGCCCG	TGGAGATCAG	CAAGACAGTC	
CTCTGGCCAG	AGAGCATCAG	CGTGGTGCGA	TGTGTGGAGT	TGTTTGAGGC	1100
CCCGGTGGAG	TGTGAGGAGG	AGGAGGAGGT	AGAGGAAGAA	AAAGGGAGCT	
TCTGTGCATC	GCCTGAGAGC	AGCAGGGATG	ACTTCCAGGA	GGGAAGGGAG	1200
			C		
GGCATTGTGG	CCCGGCTAAC	AGAGAGCCTG	TTCTTGAGAC	TGCTCGGAGA	
			T		
GGAGAATGGG	GGCTTTTGCC	AGCAGGACAT	GGGGGAGTCA	TGCCTTCTTC	1300
			C	T	C
CACCTTCGGG	AAGTACGAGT	GCTCATATGC	CCTGGGATGA	GTTCCCAAGT	
CGAGGGCCCA	AGGAGGCCAC	TCCCTGGGCG	AAGGAGCAGC	CTCTCCACCT	1400
GGAGCCAAGT	CCTCTTGCCA	GCCCGACCCA	GAGTCCAGAC	AACCTGACTT	
GCACAGAGAC	GCCCTCGTGC	ATGCGCAGGA	ACCCTGCCTTA	CGCGAGCTTC	1500
AGCAAGTCCC	TGAGCAGATC	ACCCTGTCCC	AGAGAGCTGG	GTCCAGAGCC	
C					
ACTGCTGGCC	AGACACCTGG	AGGAAGTAGA	ACCCGAGATG	CCCTGTGTCC	1600
CCCAGCTCTC	TGAGCCAAAC	ACTGTGCCCC	AACCTGAGCC	AGAAACCTGG	
GAGCAGATCC	TCCGCCGAAA	TGTCCTCCAG	CATGGGGCAG	CTGCAGCCCC	1700
CGTCTCGGCC	CCCACCAAGT	GCTATCAGGA	GTTTGTACAT	GCGGTGGAGC	
T		G	A		
AGGTTGGCAC	CCAGGCCAGT	GCGGTGGTGG	GCTTGGGTCC	CCCAGGAGAG	1800
GCTGGTTACA	AGGCCCTTCTC	AAGCCTGCTT	GCCAGCAGTG	CTGTGTCCCC	
AGAGAAATGT	GGGTTTGGGG	CTAGCAGTGG	GGAGAGGGGG	TATAAGCCCT	1900
TCCAAGACTT	CATTCTGGCC	TGCCCTGGGG	ACCCTGCCCC	AGTCCCTGCT	
CCCTTGTTCA	CCTTGGACT	GGACAGGGAG	CCACCTCGCA	GTCCGCGAGG	2000

FIGURE 2A

14/15

CTCACATCTC	CCAAGCAGCT	CCCCAGAGCA	CCTGGGTCTG	GAGCCGGGGG	
		T			
AAAAGGTAGA	GGACATGCCA	AAGCCCCCAC	TTCCCCAGGA	GCAGGCCACA	2100
GACCCCTTG	TGGACAGCCT	GGGCAGTGGC	ATTGTCTACT	CAGCCCTTAC	
CTGCCACCTG	TGCGGCCACC	TGAAACAGTG	TCATGGCCAG	GAGGATGGTG	2200
GCCAGACCCC	TGTCATGGCC	AGTCCTTGCT	GTGGCTGCTG	CTGTGGAGAC	
AGGTCCTCGC	CCCCTACAAC	CCCCCTGAGG	GCCCCAGACC	CCTCTCCAGG	2300
	G				
TGGGGTTCCA	CTGGAGGCCA	GTCTGTGTCC	GGCCTCCCTG	GCACCCTCGG	
GCATCTCAGA	GAAGAGTAAA	TCCTCATCAT	CCTTCCATCC	TGCCCCCTGGC	2400
			C		
AATGCTCAGA	GCTCAAGCCA	GACCCCCAAA	ATCGTGAACT	TTGTCTCCGT	
GGGACCCACA	TACATGAGGG	TCTCTT			2476

FIGURE 2B

ISOFORMS OF THE IL4R $\alpha$  PROTEIN

MGWLCSSGLLF	PVSCLVLLQV	ASSGNMKVLQ	EPTCVSDYMS	ISTCEWKMNQ	
PTNCSTELRL	LYQLVFLLE	AHTCIPENNG	GAGCVCHLLM	DDVVSADNYT	100
		V	T		
LDLWAGQQLL	WKSFKPSEH	VKPRAPGNLT	VHTNVSDTLL	LTWSNPYPDP	
NYLYNHLYA	VNIWSENDPA	DFRIYNVTYL	EPSLRIAAST	LKSGISYRAR	200
			H		
VRAWAQCYNT	TWSEWSPSTK	WHNSYREPFE	QHLLLGVSVS	CIVILAVCLL	
CYVSITKIKK	EWWDQIPNPA	RSRLVAIIIQ	DAQGSQWEKR	SRGQEPKCP	300
HWKNCLTKLL	PCFLEHNMKR	DEDPHKAKE	MPFQGSCKSA	WCPVEISKTV	
LWPESISVVR	CVELFEAPVE	CEEEEEVEEE	KGSFCASPES	SRDDFQEGRE	400
				A	
GIVARLTESL	FLDLLGEENG	GFCQQDMGES	CLLPPSGSTS	AHMPWDEFFS	
			R		
AGPKEAPPWG	KEQPLHLEPS	PPASPTQSPD	NLTCTETPLV	IAGNPAYRSF	500
SNSLSQSPCP	RELGPDPILA	RHLEEEVEPEM	PCVPQLSEPT	TVPQPEPETW	
		P			
EQILRRNVLQ	HGAAAAPVSA	PTSGYQEFVH	AVEQGGTQAS	AVVGLGPPGE	600
		R	I		
AGYKAFSSLL	ASSAVSPEKC	GFGASSGEEG	YKPFQDLIPG	CPGDPAPVPV	
PLFTFGLDRE	PPRSPQSSHL	PSSSPEHLGL	EPGEKVEDMP	KPPLPQEQAT	700
		S			
DPLVDSLGS	IVYSALTCHL	CGHLKQCHGQ	EDGGQTPVMA	SPCCGCCCGD	
RSSPPTPLR	APDPSPGGVP	LEASLCPASL	APSGISEKSK	SSSSFHPAPG	800
		A			
NAQSSSQTPK	IVNFVSVGPT	YMRVS			825

FIGURE 3